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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,416	12/21/2001	Akinori Ro	4296/PCT	1899

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EXAMINER

COMBS, JANELL A

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/019,416	Applicant(s) RO ET AL.	
	Examiner Janelle Combs-Morillo	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3,5</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- I. Claims 1-4, 9, and 10, drawn to an aluminum alloy, classified in class 420, subclass 550.
 - II. Claims 5-8, drawn to process of heat treating and working an aluminum alloy, classified in class 148, subclass 691.
2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: said groups I and II lack the same special technical feature, because the aluminum alloy product is known.
3. During a telephone conversation with Walter Fasse on April 4, 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-4, 9, and 10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 5-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Werner et al (US 5,030,416 A).

Werner teaches an example of an aluminum alloy foil (abstract) consisting of (in weight%): 0.11% Si, 0.55% Fe, <0.005% Cu, 1.05% Mn, 0.006% Ti, balance aluminum (see Table in column 2), which falls within the presently claimed alloying ranges.

With regard to the Cu content taught by Werner of “<0.005% Cu”, because Werner teaches a narrow range that overlaps the instant range of Cu “with sufficient specificity” (see MPEP 2131.03), it is held that Werner anticipates the instant claim.

Concerning claim 4, though Werner does not teach the mechanical properties of said foil, the examiner asserts that “products of identical chemical composition can not have mutually exclusive properties.” *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Art Unit: 1742

A chemical composition and its properties are inseparable. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims (such as elongation and YS) are held to be inherently present. See MPEP 2112.01.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shabel et al (US 4,737,198 A).

Shabel teaches an Al-Fe-Mn alloy comprising (in weight%): 0.5-1.2% Fe, 0.7-1.3% Mn, 0-0.5% Si (see Shabel at claim 9), 0-0.2% Cu, $\leq 0.15\%$ Ti (see Table 1), wherein said alloy is suitable for foil gauge sheet 0.003-0.006 in (76-152 μ m) thick (column 1 lines 41-42). Shabel teaches that the preferably 0.00-0.10% Cu and 0.05-0.25% Si is present (Table III). Shabel teaches that “copper shifts the solution potential of the material such that the corrosion resistance of the alloy is adversely affected”, and therefore is preferably minimized.

Art Unit: 1742

Concerning independent claim 9 and dependent claim 4, Shabel teaches a thickness (X)=0.003-0.006 in (76-152 μm), a YS=15-16 ksi (103-110 MPa), and an elongation of 30-32% (see Table 1).

Concerning the equation $YS > 28.7 \ln(X) - 30$, for the alloy taught by Shabel the (minimum) right side of the equation would be: $28.7 \ln(76 \mu\text{m}) - 30 = 94$, and because Shabel teaches YS=103-110 MPa, Shabel is held to meet the instant limitation.

Concerning the equation of $El > 0.15X + 3.5$, the right side of the equation ranges from 14.9-26.3 for X=76-152 μm , and because Shabel teaches an elongation of 30-32%, Shabel is held to meet the instant limitation.

Because Shabel teaches a substantially overlapping alloy composition, as well as motivation to select the presently claimed narrow ranges of Cu and Si, it is held that Shabel has created a prima facie case of obviousness of the presently claimed invention. Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05, *In re Best* 195 USPQ 430, *In re Malagari*, 182 USPQ 549, *In re Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir 1985), *In re Woodruff*, 16 USPQ 2d 1934, and *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

Concerning dependent claims 2 and 3, Shabel teaches an overlapping alloy composition as stated above.

Dependent claim 4 is addressed above.

Concerning dependent claim 10, as stated above, Shabel teaches said alloy is suitable for foil gauge sheet 0.003-0.006 in (76-152 μm) thick (column 1 lines 41-42). Shabel is held to meet

the limitation of “A container”, because Shabel teaches said foil gauge sheet is suitable for fin stock or foil for packaging applications (column 3 lines 4-5).

9. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 62-007826 (JP’826).

JP’826 teaches an aluminum alloy containing (in weight%): 0.5-3.0% Fe, 0.05-1.0% Mn, at least one selected from 0.05-0.2% Cr, 0.05-0.15% Zr, and 0.05-1.5% Si, balance aluminum (abstract). JP’826 teaches $\leq 0.1\%$ Ti is also present and it is preferable to avoid Cu because Cu causes deterioration in work-softening characteristics (abstract). In the Examples of Table 1, JP’826 teaches typical Cu values of 0.01%.

Because JP’826 teaches a substantially overlapping alloy composition, as well as motivation to select the presently claimed narrow ranges of Cu, it is held that JP’826 has created a prima facie case of obviousness of the presently claimed invention. Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05.

Concerning dependent claims 2 and 3, JP’826 teaches an aluminum alloy composition that overlaps or touches the boundary of the presently claimed alloying ranges (see above for ranges taught by JP’826).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs- Morillo whose telephone number is (703) 308-4757. The examiner can normally be reached Monday through Friday from 7:30am to 5:00pm.


Application/Control Number: 10/019,416

Page 7

Art Unit: 1742

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (703) 308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER

jcm 

April 10, 2003